Class –X

Time : 40 Min

Sub. –Maths

F.M. - 20

Section - A (2 × 5 = 10)

1) Find the ratio in which the line segment joining the points (-3,10) and (6, -8) is divided by (- 1,6).

2) Check whether (5, -2), (6 ,4) and (7,-2) are the vertices of an isosceles triangle.

3)   A solid is in the form of a cylinder with hemispherical ends .The total height of the solid is 20 cm and the diameter of the cylinder is 7 cm .Find the total volume of the solid.

4)   A cubicial block of side 7 cm is surmounted by a hemisphere. What is the greatest diameter the hemisphere can have ? Find the surface area of the solid .

5)   Find the coordinates of the points of trisection of the line segment joining the points (4,-1) and (-2,-3).

Section - B (5 × 2 = 10)

6) From a solid cylinder whose height is 2.4 cm and diameter 1.4 cm ,a conical cavity of the same height and same diameter is hollowed out .

Find the total surface area and volume of the remaning solid to the nearest cm².

7) If the point P(k-1,2) is equidistant from the points A(3,k) and B (k,5) ,find the values of k.

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